

We Claim:

1. A method for multi-subscriber detection using a RAKE receiver structure having a fixed time offset between the RAKE fingers, which comprises the step of:

mapping a multi-subscriber system matrix onto the RAKE receiver structure by allocating each of the RAKE fingers to a defined section of the multi-subscriber system matrix; and

deactivating at least one of the RAKE fingers for reducing power consumption of the RAKE receiver structure during operation.

2. The method according to claim 1, which further comprises:

measuring energy levels of signals associated with the RAKE fingers; and

determining which of the RAKE fingers are to be deactivated in dependence on the energy levels measured.

3. The method according to claim 1, which further comprises:

determining a value of an assessment variable which is characteristic of a quality of service of a detected signal; and

determining a number of active RAKE fingers in dependence on a the value of the assessment variable.

4. The method according to claim 3, which further comprises forming the assessment variable as a bit error rate (BER).

5. The method according to claim 1, wherein the method is used in a mobile station in a mobile radio system.

6. The method according to claim 1, which further comprises carrying out ZF multi-subscriber equalization on received signals.

7. The method according to claim 1, which further comprises carrying out MMSE multi-subscriber equalization on received signals.

8. A RAKE receiver structure for multi-subscriber detection, comprising:

rake fingers; and

means for deactivating at least one of said RAKE fingers for reducing power consumption during operation.

9. The RAKE receiver structure according claim 8, further comprising:

means for measuring energy levels of signals associated with said RAKE fingers; and

a means for determining which of said RAKE fingers are to be deactivated, in dependence on the energy levels measured.

10. The RAKE receiver structure according to claim 8, further comprising:

means for determining an assessment variable which is characteristic of a quality of service of a detected signal; and

means for determining which of said RAKE fingers are to be deactivated, in dependence on a determined assessment variable.

11. The RAKE receiver structure according to claim 8, further comprising means for calculating multi-subscriber equalizer coefficients for ZF equalization of received signals.

12. The RAKE receiver structure according to claim 8, further comprising means for calculating multi-subscriber equalizer coefficients for MMSE equalization of received signals.

13. A RAKE receiver structure for multi-subscriber detection, comprising:

rake fingers; and

a switch connected to and deactivating at least one of said RAKE fingers for reducing power consumption during operation.

14. The RAKE receiver structure according claim 13, further comprising:

a channel estimator coupled to said rake fingers; and

a control and assessment unit coupled to said rake fingers, said channel estimator and said control and assessment unit measuring energy levels of signals associated with said RAKE fingers, said control and assessment unit determining which of said RAKE fingers are to be deactivated, in dependence on the energy levels measured.

15. The RAKE receiver structure according to claim 13, further comprising:

means for determining an assessment variable which is characteristic of a quality of service of a detected signal; and

a control and assessment unit coupled to said rake fingers for determining which of said RAKE fingers are to be deactivated, in dependence on a determined assessment variable.

16. The RAKE receiver structure according to claim 13, further comprising a calculating unit coupled to said rake fingers for calculating multi-subscriber equalizer coefficients for ZF equalization of received signals.

17. The RAKE receiver structure according to claim 13, further comprising a calculating unit coupled to said rake fingers for calculating multi-subscriber equalizer coefficients for MMSE equalization of received signals.